PREMIUM 5654 TYPE

5654
SHARP-CUTOFF PENTODE

MINIATURE TYPE

Intended for RF and IF Broad-Band Applications where dependable performance under shock and vibration are paramount. The 5654 is a "premium" version of the 6AK5.

GENERAL DATA

Electrical:

Heater, Pure Tungsten, for Unipotential Cathode:

Voltage	6.3 ± 10%	ac or dc volts
Current	0.175	amp

Direct Interelectrode Capacitances:▲

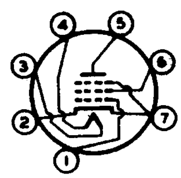
Grid No.1 to Plate	0.020 max.	μμf
Input	4.0	μμf
Output	2.85	μμf

Mechanical:

Mounting Position	Any
Maximum Overall Length	1-3/4"
Maximum Seated Length	1-1/2"
Length from Base Seat to Bulb Top (Excluding tip)	1-1/8" ± 3/32"
Maximum Diameter	3/4"
Bulb	T-5-1/2
Base	Small-Button Miniature 7-Pin (JETEC No.E7-1)

BOTTOM VIEW

Pin 1 - Grid No.1
Pin 2 - Cathode, Grid No.3, Int. Shield
Pin 3 - Heater
Pin 4 - Heater



Pin 5 - Plate
Pin 6 - Grid No.2
Pin 7 - Cathode, Grid No.3, Int. Shield

AMPLIFIER - Class A_1

Maximum Ratings, ***Absolute Values*****:**

PLATE VOLTAGE	200 max.	volts
GRID-No.2 (SCREEN) VOLTAGE	155 max.	volts
PLATE DISSIPATION	1.85 max.	watts
GRID-No.2 INPUT	0.55 max.	watt
CATHODE CURRENT	20 max.	ma
PEAK HEATER-CATHODE VOLTAGE:		
Heater positive with respect to cathode	100 max.	volts
Heater negative with respect to cathode	100 max.	volts

Typical Operation and Characteristics:

Plate Voltage	120	180	volts
Grid-No.2 Voltage	120	120	volts

▲ According to RTMA Standard ET-109A with external shield No.316.

JAN. 1, 1953 TENTATIVE DATA

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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Cathode-Bias Resistor	180	180	ohms
Plate Resistance (Approx.) . . .	0.30	0.50	megohm
Transconductance	5000	5100	μmhos
Plate Current	7.5	7.7	ma
Grid-No.2 Current	2.5	2.4	ma
Grid-No.1 Voltage (Approx.) for plate current of 10 μamp .	-8.5	-8.5	volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance . . . . . . 0.5 max. megohm

SPECIAL RATINGS & PERFORMANCE DATA

Shock Rating:

Impact Acceleration . . . . 500 max. g

Tubes are held rigid in three different positions in a Navy Type, High Impact (flyweight) Shock Machine and are subjected to 500 g impact acceleration.

Fatigue Rating:

Vibrational Acceleration . . . . 2.5 max. g

Tubes are rigidly mounted and subjected in each of three positions to 2.5 g vibrational acceleration at 60 cycles per second for 32 hours.

Heater Cycling Life Performance:

Cycles of Intermittent Operation . . . 2000 min. cycles

Under the following conditions: With heater voltage of 7.5 volts cycled 1 minute on and 1 minute off, heater positive with respect to cathode by +100 volts dc, and plate, grid-No.2, and grid-No.1 voltage = 0 volts.

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	Note	*Min.*	*Max.*	
Heater Current	1	0.160	0.190	amp
Grid-No.1-to-Plate Capacitance	-	-	0.020	μμf
Input Capacitance	-	3.4	4.6	μμf
Output Capacitance	-	2.45	3.25	μμf
Plate Current	1,2	3.0	12.0	ma
Transconductance	1,2	3500	6500	μmhos
Reverse Grid Current	1,3	-	0.1	μamp

Note 1: With 6.3 volts ac on heater.

Note 2: With plate voltage of 120 volts, grid-No.2 voltage of 120 volts, and grid-No.1 voltage of -2 volts.

Note 3: With plate voltage of 120 volts, grid-No.2 voltage of 120 volts, grid-No.1 voltage of -2 volts, and grid-No.1 resistor of 0.1 megohm.

CURVES
are the same as shown for Type 6AK5
in the Receiving Tube Section

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